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09/771,631	01/30/2001	Mehdi Hamadou	Q62250	1269

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EXAMINER
HOLMES, MICHAEL B

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *(3)* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 January 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-14</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>07 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☒ Certified copies of the priority documents have been received in Application No. <u>09/771,631</u>.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>8</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner's Detailed Office Action

1.   This action is responsive to application **09/771,631**, filed **January 30, 2001**.

2.   **Claims 1-14** have been examined.

Information Disclosure Statement

3.   Examiner acknowledges applicants' submission of prior art and information disclosure.

Nevertheless, applicant is respectfully remind of the ongoing Duty to disclose 37 C.F.R. 1.56

all pertinent information and material pertaining to the patentability of applicant's claimed in-

vention, by continuing to submitting in a timely manner PTO-1449, Information Disclosure

Statement (IDS) with the filing of applicant's of application or thereafter.

Drawings

4.   The formal drawings have been reviewed by the United States Patent & Trademark

Office of Draftperson's Patent Drawings Review.

Specification

5.   The specification has not been checked to the extent necessary to determine the presence

of all possible minor errors. Applicant's cooperation is required in correcting any errors of which

applicant may become aware in the specification. Appropriate correction is required.

Claim Interpretation

6.   Office personnel are to give claims their **"broadest reasonable interpretation"** in light

of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28

(Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not

read into the claim. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551(CCPA

1969). See *also In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322(Fed. Cir. 1989)

("During patent examination the pending claims must be interpreted as broadly as their terms

reasonably allow. . . . The reason is simply that during patent prosecution when claims can be

amended, ambiguities should be recognized, scope and breadth of language explored, and clari-

fication imposed. . . . An essential purpose of patent examination is to fashion claims that are

precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be

removed, as much as possible, during the administrative process."). *see* MPEP § 2106

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

8.   **Claims 1-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention. Specifically, "a real device having real subcomponents" ambiguous, vague, and

indefinite. Moreover, there are a myriad of software and hardware applications, products, and

systems, inclusive of virtual and automatic components and processes. Applicant will have to

be a lot more specific, regarding the claimed invention.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

10.   **Claims 1-14** are rejected under 35 U.S.C. 102(b) as being anticipated by

Saucedo et al. (USPN 5,754,738), Filed: June. 7, 1996; Date of Patent: May 19, 1997.

Regarding claim 1:

Saucedo teaches

-       a system for operating and monitoring a real device having real subcomponents,

        the system comprising: a data processing device, comprising a software model

        including virtual components, wherein the software model represents the real

        device, and wherein the virtual components are linked to each other in corres-

        pondence to relationships of or within the real device **[(col. 1, line 8-14); col. 1,**

line 37 to col. 2, line 23 *"The present invention is directed to a computerized*

prototyping system containing a virtual system design environment ... and to

automatically optimize the model with the help of a knowledge based expert

system.")]; and a display for displaying views associated with the virtual com-

ponents **[(col. 1, line 8-14); col. 1, line 37 to col. 2, line 23** *"The present invent-*

tion is directed to a computerized prototyping system containing a virtual system

design environment ... and to automatically optimize the model with the help of a

knowledge based expert system.")]; wherein at least one of the virtual components

and the views include access data for accessing at least one of local information

data and global information data, which are associated with the virtual compo-

nents. **[(col. 1, line 8-14); col. 1, line 37 to col. 2, line 23** *"The present invention*

is directed to a computerized prototyping system containing a virtual system de-

sign environment ... and to automatically optimize the model with the help of a

knowledge based expert system.")]

Regarding claim 2:

Saucedo teaches

the real device comprises an automation system. **[(Abstract of the Invention** *"and to*

automatically optimize the model with the help of a knowledged based expert system.")]

Regarding claim 3:

Saucedo teaches

links between the virtual components form a data structure of the software model that is stored in the data processing device. **[(col. 1, line 8-14); col. 1, line 37 to col. 2, line 23** *"The present invention is directed to a computerized prototyping system containing a virtual system design environment ... and to automatically optimize the model with the help of a knowledge based expert system."***)]**

Regarding claim 4:

Saucedo teaches

the virtual components comprise a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs, and wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships,physical relationships, and technical relationships of or within the real device. **[(col. 1, line 8-14); col. 1, line 37 to col. 2, line 23** *"The present invention is directed to a computerized prototyping system containing a virtual system design environment ... and to automatically optimize the model with the help of a knowledge based expert system."***)]**

Regarding claim 5:

Saucedo teaches

the data processing programs are embedded in a software frame via cross-references, and wherein at least one of the software frame and the cross-reference is structured to permit, for navigation purposes, access by a user to at least one of the virtual device and the virtual

subcomponents. [(col. 3, line 50-61 *"Initially, attention is directed to* **FIG. 35** *which shows a schematic representation of the general interrelationships between the human user and the computerized prototyping system of the invention, including the various components and associated interfaces. Stored in a computer RAM of the prototyping system are graphic software code, design browsers code, constraint solver program code, printer and plotter drivers, optimization algorithm code and knowledge base system code. Further, a computer hard drive contains the requisite database. Input devices include a keyboard and mouse, and a printer and plotter may be plotter may be provided in addition to the user interface screen."*)]

Regarding claim 6:

Saucedo teaches

further comprising: a connection between the data processing device and the real device, wherein, via the connection, control data and process data are transmitted in at least one of a unidirectional manner and a bi-directional manner; and a component arranged in the data processing device, wherein the component is structured for at least one of transmitting and receiving data. [(col. 3, line 50-61 *"Initially, attention is directed to* **FIG. 35** *which shows a schematic representation of the general interrelationships between the human user and the computerized prototyping system of the invention, including the various components and associated interfaces. Stored in a computer RAM of the prototyping system are graphic software code, design browsers code, constraint solver program code, printer and plotter drivers, optimization algorithm code and knowledge base system code. Further, a computer hard*

drive contains the requisite database. Input devices include a keyboard and mouse, and a printer

and plotter may be plotter may be provided in addition to the user interface screen.")]

Regarding claim 7:

Saucedo teaches

technologically different ones of the virtual subcomponents are assigned to the virtual device,

wherein technologically structured subordinate components are assigned to each of the virtual

subcomponents, and wherein the access data are structured for navigating a user through the

virtual device, through the technologically different virtual subcomponents, and through the

subordinate components. **[(col. 3, line 50-61** *"Initially, attention is directed to* **FIG. 35** *which*

shows a schematic representation of the general interrelationships between the human user and

the computerized prototyping system of the invention, including the various components and

associated interfaces. Stored in a computer RAM of the prototyping system are graphic software

code, design browsers code, constraint solver program code, printer and plotter drivers,

optimization algorithm code and knowledge base system code. Further, a computer hard drive

contains the requisite database. Input devices include a keyboard and mouse, and a printer and

plotter may be plotter may be provided in addition to the user interface screen. ")]

Regarding claim 8:

Saucedo teaches

-        a method for operating and monitoring a real device having real subcomponents,

comprising: navigating in a model stored in a data processing device, wherein the

model comprises virtual components and views, wherein the virtual components

represent the real device, and wherein the views are assigned to the virtual com-

ponents **[(col. 3, line 50 to col. 4, line 13** " *As shown in* **FIG. 1,** *the virtual system*

design environment ... **ODSS** *allows the downselection of alternate designs and*

their high level design optimization. ")]; assigning a model structure to the model,

wherein the model structure is stored in the data processing device, and wherein

the model structure comprises a linkage of the virtual components in correspon-

dence to relationships of or within the real device **[(col. 4, line 51-63** " *Each stage*

will be associated with a set of specification ... The components of the overall

system is shown in **FIG. 4.** *The flow-chart representation of the evaluation*

methodology is shown in **FIG. 5.** ")]; and accessing at least one of local infor-

mation data and global information data via access data that are included in at

least one of the virtual components and the views, wherein the local information

data and the global information data are associated with the virtual components.

[(col. 4, line 51-63 " *Each stage will be associated with a set of specification ...*

The components of the overall system is shown in **FIG. 4.** *The flow-chart repre-*

sentation of the evaluation methodology is shown in **FIG. 5.** ")]

Regarding claim 9:

Saucedo teaches

further comprising displaying the local information data and the global information data to a user

via the views. [(col. 5, line 4-10 *"The designer either builds a KBS using the ODSS or loads a*

previously designed KBS into the ODSS. During the KBS building, variables at each level and

their interconnection strengths are provided through a text edit window. The designer views the

decision tree structure through the graphical user interface and makes any necessary changes to

the model, at any time during the design process.")]

Regarding claim 10:

Saucedo teaches

further comprising assigning a menu bar to a specific one of the views, wherein the menu bar

identifies access capabilities to other available ones of the views, which are different from the

specific one of the views. [**FIG. 11, FIG. 12 & FIG. 13** (col. 7, line 4-26 *"The Graphical User*

Interface is an important component of ODSS and VSDE. In using the VSDE, many of the

flexibility comes from user-friendly GUIS. Mainly there are three types of interfaces in ODSS.

... In this case ODSS evaluated six different design alternatives against a set of designer

specified criteria and ranked them in numerical order.")]

Regarding claim 11:

Saucedo teaches

further comprising transmitting data via a connection between the data processing device and the

real device. [(col. 3, line 50-61 *"Initially, attention is directed to* **FIG. 35** *which shows a*

schematic representation of the general interrelationships between the human user and the

computerized prototyping system of the invention, including the various components and

associated interfaces. Stored in a computer RAM of the prototyping system are graphic

software code, design browsers code, constraint solver program code, printer and plotter

drivers, optimization algorithm code and knowledge base system code. Further, a computer hard

drive contains the requisite database. Input devices include a keyboard and mouse, and a printer

and plotter may be plotter may be provided in addition to the user interface screen. ")]

Regarding claim 12:

Saucedo teaches

the data comprise at least one of operation data and control data. [**FIG. 11, FIG. 12 & FIG. 13**

(col. 7, line 4-26 *"The Graphical User Interface is an important component of ODSS and VSDE.*

In using the VSDE, many of the flexibility comes from user-friendly GUIS. Mainly there are three

types of interfaces in ODSS. ... In this case ODSS evaluated six different design alternatives

against a set of designer specified criteria and ranked them in numerical order.")]

Regarding claim 13:

Saucedo teaches

further comprising activating a virtual subcomponent as one of the views by selecting a section

of an image of the real device, wherein the section represents the virtual subcomponent. [**FIG.**

11, FIG. 12 & FIG. 13 (col. 7, line 4-26 *"The Graphical User Interface is an important*

component of ODSS and VSDE. In using the VSDE, many of the flexibility comes from user-

friendly GUIS. Mainly there are three types of interfaces in ODSS. ... In this case ODSS

evaluated six different design alternatives against a set of designer specified criteria and ranked

them in numerical order.")]

Regarding claim 14:

Saucedo teaches

- a user interface for operating and monitoring a device comprising subcomponents

  interrelated through technical relationships, wherein the user interface comprises a

  plurality of screen windows on a screen of a display **[FIG. 11, FIG. 12 & FIG.**

  13 (col. 7, line 4-26 *"The Graphical User Interface is an important component of*

  ODSS and VSDE. In using the VSDE, many of the flexibility comes from user-

  friendly GUIS. Mainly there are three types of interfaces in ODSS. ... In this case

  ODSS evaluated six different design alternatives against a set of designer

  specified criteria and ranked them in numerical order.")]; wherein each screen

  window comprises an information set regarding one of the subcomponents of the

  device**[FIG. 11, FIG. 12 & FIG. 13 (col. 7, line 4-26** *"The Graphical User*

  Interface is an important component of ODSS and VSDE. In using the VSDE,

  many of the flexibility comes from user-friendly GUIS. Mainly there are three

  types of interfaces in ODSS. ... In this case ODSS evaluated six different design

  alternatives against a set of designer specified criteria and ranked them in

  numerical order.")]; wherein each screen window comprises at least one cross-

  reference via which a user selects a specific screen window within the plurality of

  screen windows; and wherein the respective information sets on each screen

window are linked to each other by the at least one cross-reference in corres-

pondence to the technical relationships between the subcomponents of the device.

[FIG. 11, FIG. 12 & FIG. 13 (col. 7, line 4-26 *"The Graphical User Interface is*

an important component of ODSS and VSDE. In using the VSDE, many of the

flexibility comes from user-friendly GUIS. Mainly there are three types of

interfaces in ODSS. ... In this case ODSS evaluated six different design

alternatives against a set of designer specified criteria and ranked them in

numerical order.")]

Conclusion

11.   The prior art made of record and (listed of form **PTO-892**) not relied upon is considered

pertinent to applicant's disclosure as follows: Applicant or applicant's representative is respect-

fully reminded that in process of patent prosecution i.e., amending of claims in response to a

rejection of claims set forth by the Examiner per Title 35 U.S.C. The patentable novelty must be

clearly shown in view of the state of the art disclosed by the references cited and any objections

made. Moreover, applicant or applicant's representative must clearly show how the amendments

avoid or overcome such references and objections. *See* **37 CFR § 1.111(c)**.

Correspondence Information

12.   Any inquiries concerning this communication or earlier communications from the

examiner should be directed to **Michael B. Holmes** who may be reached via telephone at

(703) 308-6280. The examiner can normally be reached Monday through Friday between

8:00 a.m. and 5:00 p.m. eastern standard time.

If you need to send the Examiner, a facsimile transmission regarding After Final

issues, please send it to **(703) 746-7238**. If you need to send an Official facsimile trans-

mission, please send it to **(703) 746-7239**. If you would like to send a Non-Official (draft)

facsimile transmission the fax is **(703) 746-7240**. If attempts to reach the examiner by tele-

phone are unsuccessful, the **Examiner's Supervisor, Anil Khatri**, may be reached at **(703)**

305-0282.

Any response to this office action should be mailed too:

Director of Patents and Trademarks Washington, D.C. 20231. Hand-delivered

responses should be delivered to the Receptionist, located on the fourth floor of

Crystal Park II, 2121 Crystal Drive Arlington, Virginia.

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ANIL KHATRI
PRIMARY EXAMINER